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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/518,937	03/06/2000	Ajay Divakaran		8894

7590 07/17/2003

Patent Department
Mitsubishi Electric Information Technology Center
America Inc
201 Broadway
Cambridge, MA 02139

EXAMINER

NGUYEN, MAIKHANH

ART UNIT	PAPER NUMBER
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2176

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DATE MAILED: 07/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/518,937

Applicant(s)

DIVAKARAN ET AL.

Examiner

Maikhanh Nguyen

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. This action is responsive to communications: original application filed 03/06/2000.
2. Claims 1-13 are currently pending in this application. Claim 1 is independent claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Miller et al.** "News On-Demand For Multimedia Networks" (Public Release 1993) in view of **Lee et al.** "Querying Multimedia Presentations Based on Content" (Public Release May/Jun 1999).

As to independent claim 1, Miller teaches a method for ordering multimedia content, comprising the steps of:

- segmenting the multimedia content to extract objects (a video segment ...a LIVE video stream object ...a audio FILE object; section 5.2);
- extracting and associating features of the objects to produce content entities (object composition; section 5.2);

- coding the content entities to produce directed acyclic graphs of the content entities, each directed acyclic graph representing a particular interpretation of the multimedia content (model supports both object composition and share ability of sub-objects and can be described as a DAG 'Directed Acyclic Graph'; section 5.2 / a video file may be defined to have 5 logical 'scenes' ...this information is currently encoded in an objects event list; section 5.6).

However, Miller is silent on "measuring attributes of each content entity; and assigning the measured attributes to each corresponding content entity in the directed acyclic graphs to rank order the multimedia content."

Lee teaches measuring attributes of each content entity; and assigning the measured attributes to each corresponding content entity in the directed acyclic graphs to rank order the multimedia content (Multimedia presentation graphs are directed acyclic graphs 'DAG'. Each presentation stream is a node in the presentation graph and edges describe sequential or concurrent playout of streams. Each presentation graph contain a Title node with attribute type value of Begin and special node with attribute type value of Terminate; page 363; right column, third and fourth paragraph).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Lee with Miller because it would have provided the enhanced capability for manipulating multimedia presentation graphs with respect to content information.

As to dependent claim 2, Miller is silent on "the measured attributes include intensity attributes."

Lee teaches the measured attributes include intensity attributes (Fig.2; page 363).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Lee with Miller because it would have provided the enhanced capability for manipulating multimedia presentation graphs with respect to content information.

As to dependent claim 3, Miller is silent on “the measured attributes include direction attributes.”

Lee teaches the measure attributes include direction attributes (two special attributes; page 363).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Lee with Miller because it would have provided the enhanced capability for manipulating multimedia presentation graphs with respect to content information.

As to dependent claim 4, Miller is silent on “the measured attributes include spatial attributes.”

Lee teaches the measured attributes include spatial attributes (partial attributes; page 365).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Lee with Miller because it would have provided the enhanced capability for manipulating multimedia presentation graphs with respect to content information.

As to dependent claim 5, Miller is silent on “the measured attributes include temporal attributes.”

Lee teaches the measured attributes include temporal attributes (GVISUAL represents temporal operators; page 364).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Lee with Miller because it would have provided the enhanced capability for manipulating multimedia presentation graphs with respect to content information.

As to dependent claim 6, Miller is silent on “the measured attributes are arranged in an increasing rank order.”

Lee teaches the measured attributes are arranged in an increasing rank order (Fig.2; page 363).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Lee with Miller because it would have provided the enhanced capability for manipulating multimedia presentation graphs with respect to content information.

As to dependent claim 7, Miller is silent on “the measured attributes are arranged in an decreasing rank order.”

Lee teaches the measured attributes are arranged in a decrease rank order (Fig.2; page 363).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Lee with Miller because it would have provided the enhanced capability for manipulating multimedia presentation graphs with respect to content information.

As to dependent claim 8, Miller is silent on “the step of traversing the multimedia content according to the directed acyclic graph and the measured attributes assigned to the content entities.” (graph traversals; page 378; left column)

Lee teaches the step of traversing the multimedia content according to the directed acyclic graph and the measured attributes assigned to the content entities (graph traversals; page 378; left column).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Lee with Miller because it would have provided the enhanced capability for manipulating multimedia presentation graphs with respect to content information.

As to dependent claim 9, Miller is silent on “the step of summarizing the multimedia content according to the directed acyclic graph and the measured attributes assigned to the content entities.”

Lee teaches the step of summarizing the multimedia content according to the directed acyclic graph and the measured attributes assigned to the content entities (page 363; right column; third and fourth paragraph).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Lee with Miller because it would have provided the enhanced capability for manipulating multimedia presentation graphs with respect to content information.

As to dependent claim 10, Miller teaches the multimedia content is a three dimensional video sequence (Multimedia information content; page3; section 4.1).

As to dependent claim 11, Miller is silent on “nodes of the directed acyclic graphs represent the content entities and edges represent breaks in the segmentation, and the measured attributes are associated with the corresponding edges.”

Lee teaches nodes of the directed acyclic graphs represent the content entities and edges represent breaks in the segmentation, and the measured attributes are associated with the corresponding edges (page 363, right column; third and fourth paragraph).

As to dependent claim 12, Miller teaches at least one secondary content entity is associated with a particular content entity, and wherein the secondary content entity is selected during the traversing (object composition ...BINDER object; section 5.2).

As to dependent claim 13, Miller teaches a summary of the multimedia is a selected permutation of the content entities according to the associated ranks (Fig. 5.1)

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Agrawal et al.	U.S Patent No. 5,412,774	issue dated: May 2, 1995
Burges et al.	U.S Patent No. 5,487,117	issue dated: Jan. 23, 1996
Norton et al.	U.S Patent No. 5,790,416	issue dated: Aug. 4, 1998
French et al.	U.S Patent No. 6,266,053	issue dated: Jul. 24, 2001

Lee et al., "Queryin Processing Techniques for Multimedia Presentation Graphs",
Department of Computer Engineering and Science, 1998, pages 130-138,

I-Jong Lin et al., "EFFICIENT REPRESENTATION AND COMPARISON OF MULTIMEDIA CONTENT USING DAG-COMPOSITION", Princeton University, Department of Electrical Engineering, 2000, pages 895-898.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maikhanh Nguyen whose telephone number is (703) 306-0092.

The examiner can normally be reached on Monday - Friday from 9:00am – 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (703) 305-9792. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-5403 for regular communications and (703) 308-5403 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Contact Information:

Any response to this action should be mailed to:

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Or fax to:

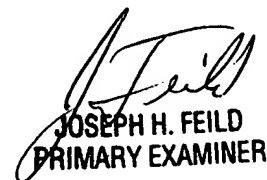
AFTER-FINAL faxes must be signed and sent to (703) 746-7238.
OFFICIAL faxes must be signed and sent to (703) 746-7239.
NON OFFICIAL faxes should be sent to (703) 746-7240.

All OFFICIAL faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the Office, e.g., Finance Division for fee charging, etc.

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Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist). All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses directly to the Examiner.

Maikhanh Nguyen
July 13, 2003


JOSEPH H. FEILD
PRIMARY EXAMINER